

**REMARKS**

The final Office Action dated October 30, 2009, has been carefully reviewed and the following remarks are responsive thereto. Claims 1 and 8 have been amended. Claims 1-4 and 8-16 remain pending. Reconsideration and allowance are respectfully requested.

***Claim Amendments***

Applicant has amended Claims 1 and 8 to remove the limitation, “moreover, with known  $x$  and  $x'$ , it is impossible to find  $a$  in calculation”.

***Claim Rejections - 35 USC§112***

Claims 1-4 and 8-16 stand rejected under 35 U.S.C. 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully submit that claims 1 and 8 have been amended and accordingly request that the claim rejections under 35 U.S.C. 112 be withdrawn. The detailed amendments and statement are as follows:

The wordings “moreover, with known  $x$  and  $x'$ , it being impossible to find  $a$  in calculation” have been removed from Claims 1 and 8. No new matter is added.

By the present amendment, **Claims 1 and 8** now recite, “the signatory ( $S$ ) selecting a braid  $x$  generated from the left subgroup  $L B_m(l)$ , a second braid  $x'$  generated from the braid group  $B_n(l)$ , and a third braid  $a$  generated from the braid group  $B_n(l)$ , by the computer, wherein the computer is adapted to making them meet  $x' = a^{-1}xa$ , and considering braid pair  $(x',x)$  as a public key of signatory ( $S$ ),  $a$  as a private key of signatory ( $S$ )”. This limitation in Claims 1 and 8 means that a signatory ( $S$ ) selects a braid  $x$ , a second braid  $x'$  and a third braid  $a$  respectively by the computer, the braid  $x$  is generated from the left subgroup  $L B_m(l)$ , the second braid  $x'$  is generated from the braid group  $B_n(l)$ , and the third braid  $a$  is generated from the braid group  $B_n(l)$ , wherein the computer is adapted to make them meet  $x' = a^{-1}xa$ ; and braid pair  $(x',x)$  is considered as a public key of signatory ( $S$ ),  $a$  is considered as a private key of signatory ( $S$ ). Applicants respectfully submits that the above amendments obviate Examiner’s rejection of Claims 1 and 8 under 35 U.S.C. 112. Accordingly, reconsideration and withdrawal of the rejection of Claims 1 and 8 are requested.

**Claims 2-4 and 13-14** directly or indirectly depend from Claim 1 and incorporate the limitations thereof. Thus, applicant respectfully submits that the amendment to Claim 1 obviates Examiner's rejection of Claims 2-4 and 13-14 under 35 U.S.C. 112. Accordingly, for at least the reasons noted above, reconsideration and withdrawal of the rejection of Claims 2-4 and 13-14 are requested.

**Claims 9-12 and 15-16** directly or indirectly depend from Claim 8 and incorporate the limitations thereof. Thus, applicant respectfully submits that the amendment to Claim 8 obviates Examiner's rejection of Claims 9-12 and 15-16 under 35 U.S.C. 112. Accordingly, for at least the reasons noted above, reconsideration and withdrawal of the rejection of Claims 9-12 and 15-16 are requested.

**Conclusion**

The Applicants believe they have responded to each matter raised by the Examiner. Allowance of the claims is respectfully solicited. It is believed that the present patent application, after the above amendments and statement of opinions, has overcome all the defects pointed out by the Examiner and is in conformity with the relevant provisions, so it should be granted patent rights. The Applicants expect early granting of patent right for this application. If there is still a problem that the Examiner believes is not overcome by the above amendments and statement of opinions, please give the Applicants another chance to make amendments and further clarification or explanation or observation.

The Commissioner is hereby authorized to charge any additional fees due or credit any overpayment to Deposit Account No. 50-2421.

Sincerely,

Dated: December 23, 2009

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